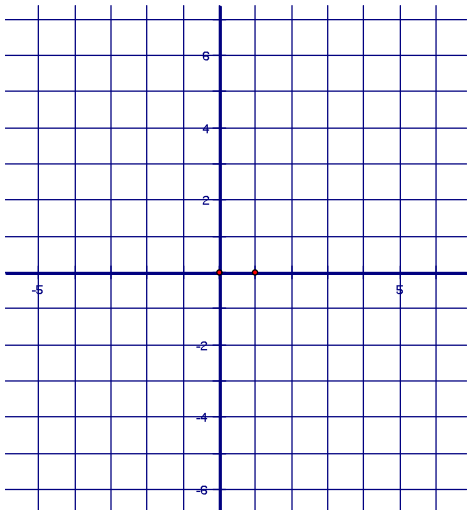
Pre Calculus Honors **Name:**
1.5 Classwork/Homework **Date:**

Part 1 Graphing Quadratics. Sketch an accurate graph of each quadratic function on the graph provided.

1. $y=\frac{1}{2}(x+1)^2-1$

Vertex: _____

Axis of Symmetry: x = _____

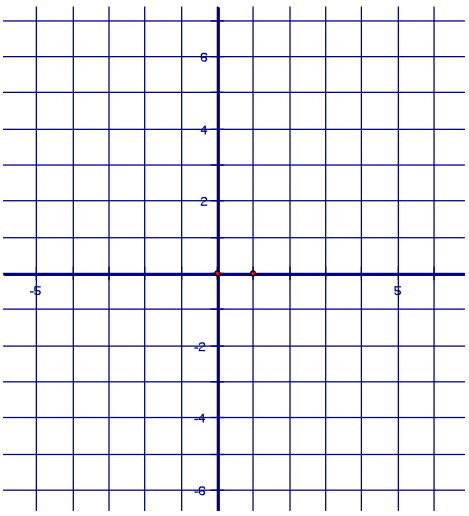


x	y

2. $y=-(x-1)^2+2$

Vertex: _____

Axis of Symmetry: x = _____



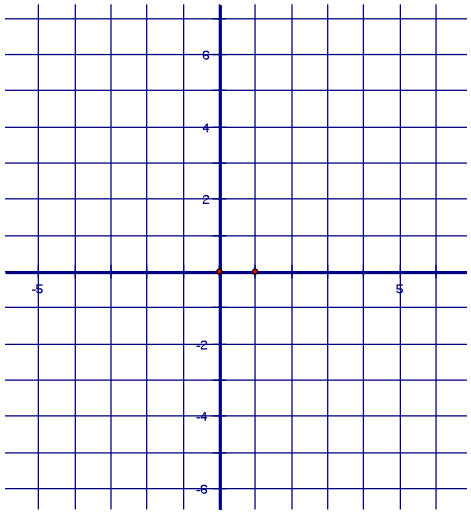
x	y

3. $y=\frac{1}{2}(x+2)(x-6)$

x-intercepts: x = _____ x = _____

Vertex: _____

Axis of Symmetry: x = _____



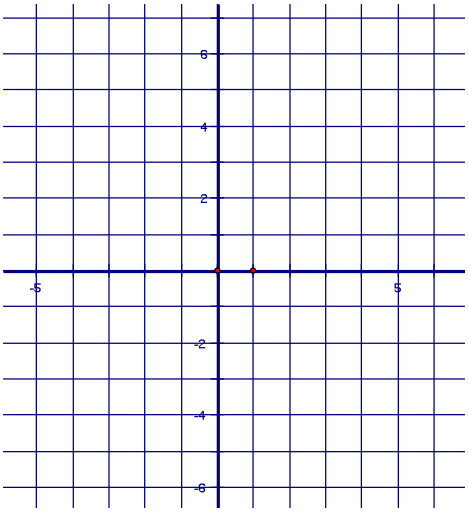
x	y

4. $y=-(x+1)(x-5)$

x-intercepts: x = _____ x = _____

Vertex: _____

Axis of Symmetry: x = _____



x	y

5. $y = x^2 - 2x - 15$

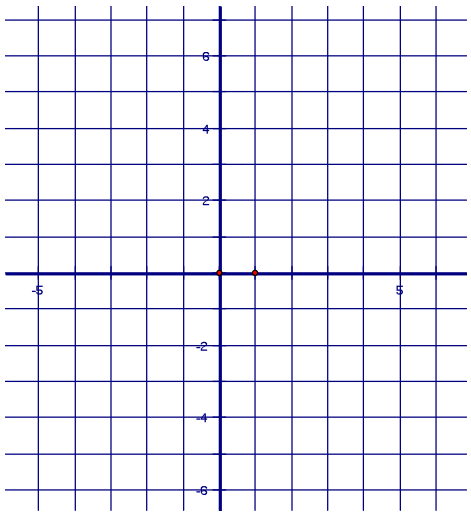
a = _____ b = _____ c = _____

$\frac{-b}{2a}$ =

x	y

Vertex: _____

Axis of Symmetry: x = _____



6. $y = -2x^2 - 8x - 5$

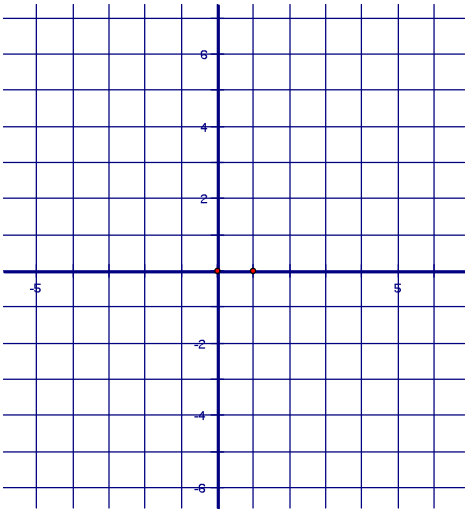
a = _____ b = _____ c = _____

$\frac{-b}{2a}$ =

x	y

Vertex: _____

Axis of Symmetry: x = _____



Part 2 – Solving Quadratic Equations.

Solve each quadratic equation by factoring or the quadratic formula.

7. $x^2 - 4x - 5 = 0$

8. $x^2 = 8x - 15$

9. $2x^2 - 4x = -3$

10. $2x^2 + 5x - 3 = 0$

11. $3x^2 = 5x - 1$

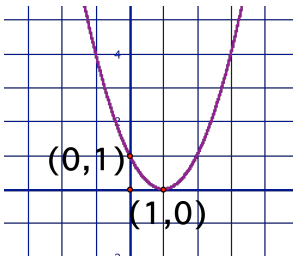
Solve using Quadratic Formula.

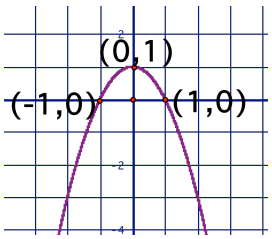
12. $x^2 = 18 - 7x$

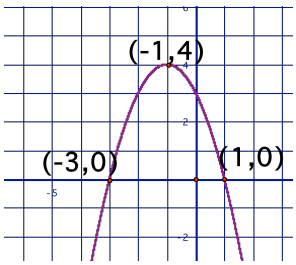
13. $2x^2 - 8x + 5 = 0$

14. $3x^2 + 10x + 6 = 0$

Write an equation for the parabola in standard form.

15. 

16. 

17. 

Write the standard form of the quadratic function that has the indicated vertex and whose graph passes through the given point.

18. Vertex: (-2, -1)
Point: (0, 3)

19. Vertex: (-2, 5)
Point: (0, 9)

20. Vertex: (4, -1)
Point: (2, 3)

21. Vertex: $\left(\frac{5}{2}, \frac{-3}{4}\right)$
Point: (-2, 4)

22. Vertex: $\left(-\frac{5}{2}, 0\right)$
Point: $\left(\frac{-7}{2}, \frac{-16}{3}\right)$